

**PROCEDURE 2–Quality Assurance Requirements for
Particulate Matter Continuous Emission Monitoring Systems at Stationary Sources
(40 CFR 60, Appendix F)**

Summary of Audit Requirements¹

Absolute Correlation Audit (ACA) [§§10.3(1), 10.3(2), 10.4(3)]

- Frequency: quarterly
- Procedure:
 - Challenge PM CEMS 3 times at each of 3 audit points using separate audit standards
 - Accuracy must be within ± 10 percent of audit response or ± 7.5 percent of applicable standard
- Use Equation 2-1a or 2-1b to calculate accuracy

Sample Volume Audit (SVA) [§§10.3(3), 10.3(4), 10.4(4)]

- Applicability: extractive systems only
- Frequency: quarterly
- Procedure:
 - Measure volume using calibrated device and compare to volume measured by PM CEMS
 - For batch systems, must sample at least 3 cycles
 - For continuous systems, must sample at least three 20-minute periods
 - Accuracy must be within ± 5 percent of measured volume
- Use Equation 2-4 to calculate accuracy

Relative Response Audit (RRA) [§§10.3(5), 10.3(6), 10.4(6), 10.5(1)(ii)]

- Frequency: as specified in applicable rule or by permit
- Procedure:
 - Take three reference method measurements and record PM CEMS responses to each
 - PM CEMS response for all 3 data points must be less than or equal to highest PM CEMS response used to develop correlation curve
 - At least 2 of 3 responses must be within the PM CEMS response range used to develop correlation curve
 - At least 2 of 3 responses must be within area defined by parallel lines ± 25 percent of emission limit above and below correlation line
- If does not pass, perform RCA

Response Correlation Audit (RCA) [§§10.3(7), 10.3(8), 10.4(5), 10.5(1)(iii), 10.6]

- Frequency: as specified in applicable rule or by permit
- Procedure:
 - Same procedure as for correlation test specified in §8.6 of PS-11, except with minimum of 12 runs
 - PM CEMS response for all 12 data points must be less than or equal to highest PM CEMS response used to develop correlation curve
 - At least 9 of 12 responses must be within the PM CEMS response range used to develop correlation curve
 - At least 75 percent of responses must be within area defined by parallel lines ± 25 percent of emission limit above and below correlation line
- If does not pass:
 - Combine data with original correlation test data to develop new correlation
 - If still does not pass, use only the RCA data to develop new correlation
 - If still does not pass, investigate cause, take corrective action (see Section 10.6(3))

¹ Requirements apply to all PM CEMS unless indicated otherwise.